



MCH Data Brief

March 2013

Kentucky Department for Public Health, Division of Maternal & Child Health

Neonatal Abstinence Syndrome

When pregnant women take addictive drugs during pregnancy, the baby also typically becomes addicted. After birth, the baby goes through withdrawal. Symptoms of withdrawal in the infants can include extreme irritability, tremors, seizures, vomiting, diarrhea, poor feeding, and inconsolability. This is called Neonatal Abstinence Syndrome, or NAS. Nationally, rates of NAS have tripled since 2000 with approximately one infant born per hour in the U.S. with signs of drug withdrawal ¹.

Symptoms of infant withdrawal due to drugs taken by the mother and passed to the baby may not start until 48-96 hours after delivery, as the levels of the drug in the baby wear off. This is frequently after discharge from the hospital setting so the babies may not be identified as having NAS. Because the effects of NAS can linger for months, even after treatment and discharge, these infants are at high risk for ongoing feeding problems with failure to thrive, and for child abuse due to their ongoing irritability and crying. Supports must be put into place to assure the safety of these infants.

Problems of NAS babies:

Excessive crying

Irritability

Neurologic issues

Poor feeding, diarrhea

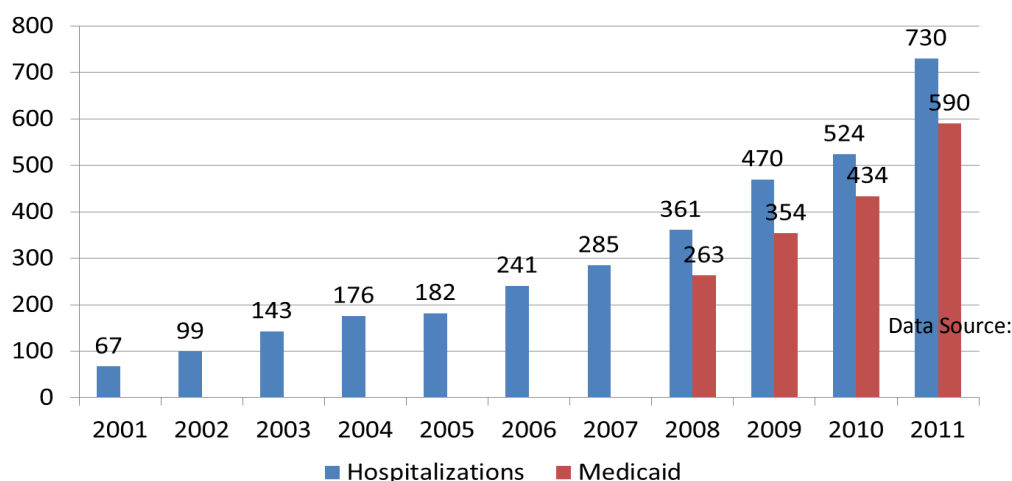
Increased risk for child abuse

? Long term outcomes

Neonatal Abstinence Among Kentucky Infants

In Kentucky, data from hospital discharge records indicate the number of cases of NAS has increased 11-fold in the last decade (67 in 2001 vs. 730 in 2011). While NAS has been increasing both in the nation and in Kentucky, Medicaid has seen the largest increase in NAS over the last several years. Patrick et al ¹ in a national study found that state Medicaid programs were the main source of payment for babies with NAS (78.1%) compared to other forms of payment. This is also true in Kentucky, where 80% of NAS is in Medicaid covered infants. In just the last four years, the rate of NAS among infants covered by KY Medicaid has more than doubled. In addition to an increased number of admissions, the average length of stay for NAS babies is covered by Medicaid is 8 times longer than for healthy newborns (16.6 days vs. 2 days) resulting in higher costs per hospital stay.

Total Number of NAS Hospitalizations among Kentucky Newborns, and Number Enrolled in Medicaid



Data Source: Kentucky Injury Prevention and Research Center, University of Kentucky Kentucky Office of Drug Control Policy Medicaid Data Source: Kentucky Department for Medicaid Services, Medicaid Management Information System, Medicaid Claims Database, Calendar years 2008-2011;

Neonatal Abstinence Syndrome and Infant Mortality

NAS and Prematurity

Preterm birth has been steadily increasing in Kentucky over the past decade.² In the KY Medicaid data, over 20% of the babies diagnosed with NAS were preterm births (before 37 weeks of gestation). Of the NAS infants born preterm, over 90% were born in the late preterm period (33-36 weeks). Even these bigger preterm infants are at higher risk for death in infancy as well as for disability. Broader approaches to preventing preterm birth by providing comprehensive care before and during pregnancy, which includes addressing mental health, substance abuse and psychosocial issues, may also have positive effects on reducing NAS.

NAS and Preconception/Interconception Care

Ideally mothers who are addicted should be able to access treatment services prior to getting pregnant (preconception) and eliminate or minimize exposure of the developing baby to substances of abuse. That kind of access is not yet possible in KY or in the nation. However, another preconception/interconception service may reduce NAS rates by a different mechanism: several states are reporting that half or more of the babies with NAS are the second or third baby that mother has had with NAS. Therefore, providing coverage for family planning services between pregnancies for women who have already delivered a baby with NAS could significantly reduce the chances of a repeat pregnancy and reduce the number of repeat babies born with NAS in this population.

NAS and Sleep-related Infant Deaths

Unsafe sleep is the leading risk factor in Kentucky for Sudden Unexpected Infant Deaths of all types (suffocation, SIDS, and Unexplained). It is estimated that 60-80% of the deaths with unsafe sleep as a risk factor also have substance abuse as a risk factor.

NAS and Infant Injury Deaths

Substance abuse is a risk factor in about 80% of deaths from child abuse. NAS babies are at particular risk for child abuse, including abusive head trauma, because the irritability and excessive crying from the withdrawal can last for weeks and months. In addition, many of the babies who go through withdrawal may not be detected at the time of birth, as symptoms may not occur until 48-96 hours after the birth. While we do not have specific numbers on how often this happens, babies who go through withdrawal at home will be extremely irritable, difficult to feed, and cry excessively, putting them at risk for child abuse.

NAS and Smoking

Substance abuse rarely involves a single drug, and most substance abusers also smoke. Exposure to second-hand smoke increases the risk for SIDS, as well as for respiratory and other illnesses in these already vulnerable children.

Prevention Efforts

NAS has become an epidemic both nationally and in the state of Kentucky. Prevention efforts as well as interventions need to be established in order to reduce the negative impact NAS has on individuals and society.

References:

1. Neonatal Abstinence Syndrome and Associated Health Care Expenditures; United States, 2000-2009
JAMA, May 9, 2012 Vol. 307, No 18: 1934-1940
2. Data Source: Kentucky Vital Statistics Files, live birth certificate files, years 2000-2010
3. March of Dimes Data Book for Policy Makers; Maternal, Infant, and Child Health in the United States, 2008